

CLAIMS

1. A pipe plug having a mold-formed plug body comprising:
 - a cylindrical radially expandable plug body having end portions and a central portion with an outer surface having a series of alternating raised ribs and textured bands;
 - first and second rigid end caps wherein the end caps have a portion inserted into the end portions of the plug body; and,
 - first and second swaging rings installed over the end portions of the plug body and the portions of the end caps inserted into the end portions of the plug body, the swaging rings being swaged into the end portions to compress the end portions of the plug body onto the end caps, wherein at least one end cap has an air fitting for inflating the pipe plug and expanding the plug body.
2. The pipe plug of claim 1 wherein the textured bands are circumferential and are formed with diagonal cross grooves to produce a knurled gripping surface.
3. The pipe plug of claim 1 wherein the raised ribs are circumferential and have a width and a height with the width substantially equal to the height.
4. The pipe plug of claim 1 wherein the end portions each have an outer surface circumferential groove for seating the swaging ring.
5. A method of fabricating an inflatable pipe plug having a mold-formed surface with improved gripping characteristics compressing the steps of:
 - a.) wrapping a mandrel with uncured rubber sheets to form a

hollow cylindrical sleeve;

- b.) Removing the uncured cylindrical sleeve from the mandrel and inserting an air bag into the sleeve;
- c.) placing the cylindrical sleeve and inserted airbag into a mold having an internal surface with a series of alternating grooves and textured bands;
- d.) inflating the airbag and heating the mold to a temperature that cures the uncured rubber sleeve, wherein the sleeve is impressed with a series of alternating raised ribs and textured bands;
- e.) removing the formed plug body from the mold;
- f.) deflating the airbag and withdrawing the airbags from the formed plug body;
- g.) inserting the end caps in the ends of the plug body;
- h.) installing swaging rings over the ends of the plug body; and
- i.) swaging the swaging rings over the inserted end caps, compressing the ends of the pipe plug body on the end caps.

- 6. The method of claim 5 wherein the airbag has connected end plugs when inserted into the uncured cylindrical sleeve, wherein one of the end plugs has an air fitting for inflating the airbag in the mold.